

## Appendix B—[Amended]

2. Table 1 of appendix B to part 300 is amended by removing the Site "Ringwood Mines Landfill, Ringwood Borough, New Jersey".

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BILLING CODE 6560-50-M

## FEDERAL COMMUNICATIONS COMMISSION

## 47 CFR Part 97

[DA 94-1158]

## Revised Procedures for Filing an Amateur Service License Application

AGENCY: Federal Communications Commission.

ACTION: Final rule.

**SUMMARY:** This Order amends the amateur service rules to provide an electronic filing capability to the volunteer-examiner coordinators (VECs), to clarify that amateur station and operator licensees are authorized as soon as the license data is entered into the Commission's licensee data base, and to reflect other non-substantive procedural changes. This action is necessary because recent modernization of the Commission's data processing capabilities makes it possible to greatly reduce the time it takes for us to grant licenses in the amateur service, and all of the VECs have notified us that they want to begin electronic filing of license application data as soon as possible. The intended effect of this action is to allow successful license examinees to operate their amateur stations as soon as possible. The text of the final rules is at the end of this document.

**EFFECTIVE DATE:** December 20, 1994.

## FOR FURTHER INFORMATION CONTACT:

William T. Cross, Special Services Division, Private Radio Bureau, Federal Communications Commission, Washington, DC 20554; or telephone (202) 632-4964.

## SUPPLEMENTARY INFORMATION:

1. This is a summary of the Order adopted October 17, 1994, and released October 24, 1994. The complete text of this Order, including the rule amendments, may also be purchased from the Commission's copy contractor, International Transcription Service, (202) 857-3800, 2100 M Street NW., Suite 140, Washington, DC 20037.

2. Accepting from the VECs electronically filed data from applications for new and upgraded amateur operator licenses, will eliminate the time and effort required

for the VECs to send, and for the Commission to receive, application documents by mail. As part of their routine operations, the VECs enter the data from the application documents they receive into an electronic form that can be sent at high speed over telephone lines to our license processing facility. This data can be used as received so that our license processors could discontinue manually reentering the data into the processing system. We have been making arrangements with the VECs to enable them to use electronic filing procedures similar to those that have been implemented for certain private land mobile radio services. The FCC Form 610 has been revised to accommodate electronic filing. VECs may also continue to send by mail to our license processing facility the application documents.

3. The decision to grant a license occurs when our license processing facility enters the data into the amateur service licensee data base. Currently, however, the new licensee must delay beginning operation until a license document can be printed, mailed, and delivered. This procedure can result in several weeks delay during which the licensee cannot operate an amateur station. Fortunately, information technology is making our amateur service licensee data base more widely available, thus diminishing the need for an amateur operator to hold a license document before exercising the privileges authorized by the grant of the license. We are amending the rules, therefore, to authorize operation on the basis of the licensee data appearing in the amateur service licensee data base.

4. Beginning in 1995, our new system also will give us the capability to make a timely mailing to a licensee's address of record a renewal short form, filled in and ready for signature. We are amending the rules to allow this form to be used. Because we cannot be certain of delivery of the form to every licensee in every instance, however, we will also continue to allow the Form 610 to be used for renewing licenses.

5. We are also combining into § 97.509 all of the administering volunteers examiner (VE) requirements that are presently stated in four separate rule sections, and adding new § 97.511, *Examinee conduct*, to emphasize that an examinee must comply with the instructions given by the administering VEs. Further, we are amending § 97.9 to treat Technician Plus as a license class.

6. We certify that the Regulatory Flexibility Act of 1980 does not apply to the amended rules because there will not be any significant economic impact on a substantial number of small

business entities, as defined by section 601(3) of the Regulatory Flexibility Act. The amateur service may not be used to transmit communications for compensation, for the pecuniary benefit of the station control operator or the station control operator's employer, or for communications, on a regular basis, which could reasonably be furnished through other radio services. See 47 CFR 97.113.

7. The Secretary shall send a copy of this Order, including the certification, to the Chief Counsel for Advocacy of the Small Business Administration in accordance with paragraph 605(b) of the Regulatory Flexibility Act, Pub. L. 96-354, 94 Stat. 1164, 5 U.S.C. 601-612 (1981).

8. The Commission ordered that effective December 20, 1994, part 97 of the Commission's rules, 47 CFR part 97, IS AMENDED as set forth below.

## List of Subjects in 47 CFR Part 97

Radio, Reporting and recordkeeping requirements, Volunteers.

Federal Communications Commission.

Ralph A. Haller,

Chief, Private Radio Bureau.

Part 97 of chapter I of Title 47 of the Code of Federal Regulations is amended as follows:

## PART 97—AMATEUR RADIO SERVICE

1. The authority citation for part 97 continues to read as follows:

**Authority:** 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303. Interpret or apply 48 Stat. 1064-1068, 1081-1105, as amended; 47 U.S.C. 151-155, 301-609, unless otherwise noted.

2. Section 97.5 is revised to read as follows:

## § 97.5 Station license required.

(a) The person having physical control of the station apparatus must have been granted a station license of the type listed in paragraph (b) of this section, or hold an unexpired document of the type listed in paragraph (c) of this section, before the station may transmit on any amateur service frequency from any place that is:

(1) Within 50 km of the Earth's surface and at a place where the amateur service is regulated by the FCC;

(2) Within 50 km of the Earth's surface and aboard any vessel or craft that is documented or registered in the United States; or

(3) More than 50 km above the Earth's surface aboard any craft that is documented or registered in the United States.

(b) The types of station licenses are:



(1) An operator/primary station license. One, but only one, operator/primary station license is granted to each person who is qualified to be an amateur operator. The primary station license is granted together with the amateur operator license. Except for a representative of a foreign government, any person who qualifies by examination is eligible to apply for an operator/primary station license. The operator/primary station license document is printed on FCC Form 660.

(2) A club station license. A club station license is granted only to the person who is the license trustee designated by an officer of the club. The trustee must be a person who has been granted an Amateur Extra, Advanced, General, Technician Plus, or Technician operator license. The club must be composed of at least two persons and must have a name, a document of organization, management, and a primary purpose devoted to amateur service activities consistent with this Part. The club station license document is printed on FCC Form 660.

(3) A military recreation station license. A military recreation station license is granted only to the person who is the license custodian designated by the official in charge of the United States military recreational premises where the station is situated. The person must not be a representative of a foreign government. The person need not have been granted an amateur operator license. The military recreation station license document is printed on FCC Form 660.

(4) A RACES station license. A RACES station license is granted only to the person who is the license custodian designated by the official responsible for the governmental agency served by that civil defense organization. The custodian must be the civil defense official responsible for coordination of all civil defense activities in the area concerned. The custodian must not be a representative of a foreign government. The custodian need not have been granted an amateur operator license. The RACES station license document is printed on FCC Form 660.

(c) The types of documents are:

(1) A reciprocal permit for alien amateur licensee (FCC Form 610-AL) issued to the person by the FCC.

(2) An amateur service license issued to the person by the Government of Canada. The person must be a Canadian citizen.

(d) A person who has been granted a station license of the type listed in paragraph (b) of this section, or who holds an unexpired document of the type listed in paragraph (c) of this

section, is authorized to use in accordance with the FCC Rules all transmitting apparatus under the physical control of the station licensee at points where the amateur service is regulated by the FCC.

3. Section 97.7 is revised to read as follows:

#### § 97.7 Control operator required.

When transmitting, each amateur station must have a control operator. The control operator must be a person who has been granted an amateur operator/primary station license, or who holds an unexpired document of the following types:

(a) A reciprocal permit for alien amateur licensee (FCC Form 610-AL) issued to the person by the FCC, or

(b) An amateur service license issued to the person by the Government of Canada. The person must be a Canadian citizen.

4. Section 97.9 is revised to read as follows:

#### § 97.9 Operator license.

(a) The classes of amateur operator licenses are: Novice, Technician, Technician Plus (until such licenses expire, a Technician Class license granted before February 14, 1991, is considered a Technician Plus Class license), General, Advanced, and Amateur Extra. A person who has been granted an operator license is authorized to be the control operator of an amateur station with the privileges of the operator class specified on the license.

(b) A person who has been granted an operator license of Novice, Technician, Technician Plus, General, or Advanced class and who has properly submitted to the administering VEs an application document, FCC Form 610, for an operator license of a higher class, and who holds a CSCE indicating that the person has completed the necessary examinations within the previous 365 days, is authorized to exercise the rights and privileges of the higher operator class until final disposition of the application or until 365 days following the passing of the examination, whichever comes first.

5. Section 97.17 is revised to read as follows:

#### § 97.17 Application for new license or reciprocal permit for alien amateur licensee.

(a) Any qualified person is eligible to apply for an amateur service license.

(b) Each application for a new amateur service license must be made on the proper document:

(1) FCC Form 610 for a new operator/primary station license;

(2) FCC Form 610-A for a reciprocal permit for alien amateur licensee; and

(3) FCC Form 610-B for a new amateur service club or military recreation station license.

(c) Each application for a new operator/primary station license must be submitted to the VEs administering the qualifying examination.

(d) Any eligible person may apply for a reciprocal permit for alien amateur licensee. The application document, FCC Form 610-A, must be submitted to the FCC, 1270 Fairfield Road, Gettysburg, PA 17325-7245.

(1) The person must be a citizen of a country with which the United States has arrangements to grant reciprocal operating permits to visiting alien amateur operators is eligible to apply for a reciprocal permit for alien amateur licensee.

(2) The person must be a citizen of the same country that issued the amateur service license.

(3) No person who is a citizen of the United States, regardless of any other citizenship also held, is eligible for a reciprocal permit for alien amateur licensee.

(4) No person who has been granted an amateur operator license is eligible for a reciprocal permit for alien amateur licensee.

(e) No person shall obtain or attempt to obtain, or assist another person to obtain or attempt to obtain, an amateur service license or reciprocal permit for alien amateur licensee by fraudulent means.

(f) One unique call sign will be shown on the license of each new primary station. The call sign will be selected by the sequential call sign system.

(g) No new license for a club, military recreation, or RACES station will be granted.

#### § 97.19 [Removed and reserved]

6. Section 97.19 is removed and reserved.

7. Section 97.21 is revised to read as follows:

#### § 97.21 Application for a modified or renewed license.

(a) A person who has been granted an amateur station license that has not expired:

(1) Must apply for a modification of the license as necessary to show the correct mailing address, licensee name, club name, license trustee name, or license custodian name. The application document must be submitted to: FCC, 1270 Fairfield Road, Gettysburg, PA 17325-7245. For an operator/primary station license, the application must be made on FCC Form 610. For a club,



military recreation, or RACES station license, the application must be made on FCC Form 610-B.

(2) May apply for a modification of the license to show a higher operator class. The application must be made on FCC Form 610 and must be submitted to the VEs administering the qualifying examination.

(3) May apply for renewal of the license for another term. (The FCC may mail to the licensee an FCC Form 610-R that may be used for this purpose.) The application may be made on the FCC Form 610-R if it is received from the FCC. If the Form 610-R is not received from the FCC at least 30 days before the expiration of the license, for an operator/primary station license, the application may be made on FCC Form 610. For a club, military recreation, or RACES station license, the application may be made on FCC Form 610-B. The application must be submitted no more than 90 days before its expiration to: FCC, 1270 Fairfield Road, Gettysburg, PA 17325-7245. When the application for renewal of the license has been received by the FCC at 1270 Fairfield Road, Gettysburg, PA 17325-7245 prior to the license expiration date, the license operating authority is continued until the final disposition of the application.

(4) May apply for a modification of the license to show a different call sign selected by the sequential call sign system. The application document must be submitted to: FCC, 1270 Fairfield Road, Gettysburg, PA 17325-7245. The application must be made on FCC Form 610. This modification is not available to club, military recreation, or RACES stations.

(b) A person who had been granted an amateur station license, but the license has expired, may apply for renewal of the license for another term during a 2 year filing grace period. The application document must be received by the FCC at 1270 Fairfield Road, Gettysburg, PA 17325-7245 prior to the end of the grace period. For an operator/primary station license, the application must be made on FCC Form 610. For a club, military recreation, or RACES station license, the application must be made on FCC Form 610-B. Unless and until the license is renewed, no privileges in this part are conferred.

(c) Each application for a modified or renewed amateur service license must be accompanied by a photocopy (or the original) of the license document unless an application for renewal using FCC Form 610-R is being made, or unless the original document has been lost, mutilated or destroyed.

(d) Unless the holder of a station license requests a change in call sign, the same call sign will be assigned to the station upon renewal or modification of a station license.

(e) A reciprocal permit for alien amateur licensee cannot be renewed. A new reciprocal permit for alien amateur licensee may be issued upon proper application.

8. Section 97.23 is revised to read as follows:

#### § 97.23 Mailing address.

(a) Each application for a license and each application for a *reciprocal permit for alien amateur licensee* must show a mailing address in an area where the amateur service is regulated by the FCC and where the licensee or permittee can receive mail delivery by the United States Postal Service. Each application for a *reciprocal permit for alien amateur licensee* must also show the permittee's mailing address in the country of citizenship.

(b) When there is a change in the mailing address for a person who has been granted an amateur operator/primary station license, the person must file a timely application for a modification of the license. Revocation of the station license or suspension of the operator license may result when correspondence from the FCC is returned as undeliverable because the person failed to provide the correct mailing address.

(c) When a person who has been granted a *reciprocal permit for alien amateur licensee* changes the mailing address where he or she can receive mail delivery by the United States Postal Service, the person must file an application for a new permit. Cancellation of the *reciprocal permit for alien amateur licensee* may result when correspondence from the FCC is returned as undeliverable because the permittee failed to provide the correct mailing address.

9. Section 97.25 is revised to read as follows:

#### § 97.25 License term.

(a) An amateur service license is normally granted for a 10-year term.

(b) A *reciprocal permit for alien amateur licensee* is normally granted for a 1-year term.

10. Section 97.27 is revised to read as follows:

#### § 97.27 FCC modification of station license.

(a) The FCC may modify a station license, either for a limited time or for the duration of the term thereof, if it determines:

(1) That such action will promote the public interest, convenience, and necessity; or

(2) That such action will promote fuller compliance with the provisions of the Communications Act of 1934, as amended, or of any treaty ratified by the United States.

(b) When the FCC makes such a determination, it will issue an order of modification. The order will not become final until the licensee is notified in writing of the proposed action and the grounds and reasons therefor. The licensee will be given reasonable opportunity of no less than 30 days to protest the modification; except that, where safety of life or property is involved, a shorter period of notice may be provided. Any protest by a licensee of an FCC order of modification will be handled in accordance with the provisions of 47 U.S.C. 316.

11. Section 97.29 is added to read as follows:

#### § 97.29 Replacement license document.

Each person who has been granted an amateur station license or *reciprocal permit for alien amateur licensee* whose original license document or permit document is lost, mutilated or destroyed must request a replacement. The request must be made to: FCC, 1270 Fairfield Road, Gettysburg, PA 17325-7245. A statement of how the document was lost, mutilated, or destroyed must be attached to the request. A replacement document must bear the same expiration date as the document that it replaces.

12. In § 97.301, introductory text of paragraphs (a) through (f) are revised to read as follows:

#### § 97.301 Authorized frequency bands.

(a) For a station having a control operator who has been granted an operator license of Technician, Technician Plus, General, Advanced, or Amateur Extra Class:

(b) For a station having a control operator who has been granted an operator license of Amateur Extra Class:

(c) For a station having a control operator who has been granted an operator license of Advanced Class:

(d) For a station having a control operator who has been granted an operator license of General Class:

(e) For a station having a control operator who has been granted an



operator license of Novice or Technician Plus Class:

(f) For a station having a control operator who has been granted an operator license of Novice Class:

13. Section 97.501 is amended by revising the introductory text, paragraphs (d) and (e), and by adding new paragraph (f) to read as follows:

**§ 97.501 Qualifying for an amateur operator license.**

Each applicant for the grant of a new amateur operator license or for the grant of a modified license to show a higher operator class, must pass or otherwise receive credit for the examination elements specified for the class of operator license sought:

(d) Technician Plus Class operator: Elements 1(A) or 1(B) or 1(C), 2, and 3(A).

(e) Technician Class operator: Elements 2 and 3(A).

(f) Novice Class operator: Elements 1(A) or 1(B) or 1(C), and 2.

14. Section 97.505 is revised to read as follows:

**§ 97.505 Element credit.**

(a) The administering VEs must give credit as specified below to an examinee holding any of the following documents:

(1) An unexpired (or expired but within the grace period for renewal) FCC-granted Advanced Class operator license document: Elements 1(B), 2, 3(A), 3(B), and 4(A).

(2) An unexpired (or expired but within the grace period for renewal) FCC-granted General Class operator license document: Elements 1(b), 2, 3(A), and 3(B).

(3) An unexpired (or expired but within the grace period for renewal) FCC-granted Technician Plus Class operator (including a Technician Class operator license granted before February 14, 1991) license document: Elements 1(A), 2, and 3(A).

(4) An unexpired (or expired but within the grace period for renewal) FCC-granted Technician Class operator license document: Elements 2 and 3(A).

(5) An unexpired (or expired but within the grace period for renewal) FCC-granted Novice Class operator license document: Elements 1(A) and 2.

(6) A CSCE: Each element the CSCE indicates the examinee passed within the previous 365 days.

(7) An unexpired (or expired for less than 5 years) FCC-issued commercial radiotelegraph operator license document or permit: Element 1(C).

(8) An expired or unexpired FCC-issued Technician Class operator license document granted before March 21, 1987: Element 3(B).

(9) An expired or unexpired FCC-issued Technician Class license document granted before February 14, 1991: Element 1(A).

(10) An unexpired (or expired but within the grace period for renewal), FCC-granted Novice, Technician Plus (including a Technician Class operator license granted before February 14, 1991), General, or Advanced Class operator license document, and an FCC Form 610 containing:

(i) A physician's certification stating that because the person is an individual with a severe handicap, the duration of which will extend for more than 365 days beyond the date of the certification, the person is unable to pass a 13 or 20 words per minute telegraphy examination; and

(ii) A release signed by the person permitting the disclosure to the FCC of medical information pertaining to the person's handicap: Element 1(C).

(b) No examination credit, except as herein provided, shall be allowed on the basis of holding or having held any other license grant or document.

15. Section 97.507 is amended by revising introductory text of paragraph (a) and paragraph (a)(3) to read as follows:

**§ 97.507 Preparing an examination.**

(a) Each telegraphy message and each written question set administered to an examinee must be prepared by a VE who has been granted an Amateur Extra Class operator license. A telegraphy message or written question set, however, may also be prepared for the following elements by a VE who has been granted an FCC operator license of the class indicated:

(3) Element 2: Advanced, General, Technician, or Technician Plus Class operator.

16. Section 97.509 is revised to read as follows:

**§ 97.509 Administering VE requirements.**

(a) Each examination for an amateur operator license must be administered by 3 administering VEs at an examination session coordinated by a VEC. Before the session, the administering VEs must make a public announcement stating the location and time of the session. The number of examinees at the session may be limited.

(b) Each administering VE must:

(1) Be accredited by the coordinating VEC;

(2) Be at least 18 years of age;

(3) Be a person who has been granted an FCC amateur operator license document of the class specified below:

(i) Amateur Extra, Advanced, or General Class in order to administer a Novice, Technician, or Technician Plus Class operator license examination;

(ii) Amateur Extra Class in order to administer a General, Advanced, or Amateur Extra Class operator license examination.

(4) Not be a person whose grant of an amateur station license or amateur operator license has ever been revoked or suspended.

(5) Not own a significant interest in, or be an employee of, any company or other entity that is engaged in the manufacture or distribution of equipment used in connection with amateur station transmissions, or in the preparation or distribution of any publication used in preparation for obtaining amateur operator licenses. (An employee who does not normally communicate with that part of an entity engaged in the manufacture or distribution of such equipment, or in the preparation or distribution of any publication used in preparation for obtaining amateur operator licenses, may be an administering VE.)

(c) Each administering VE must be present and observing the examinee throughout the entire examination. The administering VEs are responsible for the proper conduct and necessary supervision of each examination. The administering VEs must immediately terminate the examination upon failure of the examinee to comply with their instructions.

(d) No VE may administer an examination to his or her spouse, children, grandchildren, stepchildren, parents, grandparents, stepparents, brothers, sisters, stepbrothers, stepsisters, aunts, uncles, nieces, nephews, and in-laws.

(e) No VE may administer or certify any examination by fraudulent means or for monetary or other consideration including reimbursement in any amount in excess of that permitted. Violation of this provision may result in the revocation of the grant of the VE's amateur station license and the suspension of the grant of the VE's amateur operator license.

(f) No examination that has been compromised shall be administered to any examinee. Neither the same telegraphy message nor the same question set may be re-administered to the same examinee.



(g) Passing a telegraphy receiving examination is adequate proof of an examinee's ability to both send and receive telegraphy. The administering VEs, however, may also include a sending segment in a telegraphy examination.

(h) Upon completion of each examination element, the administering VEs must immediately grade the examinee's answers. The administering VEs are responsible for determining the correctness of the examinee's answers.

(i) When the examinee is credited for all examination elements required for the operator license sought, the administering VEs must certify on the examinee's application document that the applicant is qualified for the license.

(j) When the examinee does not score a passing grade on an examination element, the administering VEs must return the application document to the examinee and inform the examinee of the grade.

(k) The administering VEs must accommodate an examinee whose physical disabilities require a special examination procedure. The administering VEs may require a physician's certification indicating the nature of the disability before determining which, if any, special procedures must be used.

(l) The administering VEs must issue a CSCE to an examinee who scores a passing grade on an examination element.

(m) Within 10 days of the administration of a successful examination for an amateur operator license, the administering VEs must submit the application document to the coordinating VEC.

17. Section 97.511 is revised to read as follows:

**§ 97.511 Examinee conduct.**

Each examinee must comply with the instructions given by the administering VEs.

**§ 97.515 [Removed and reserved]**

18. Section 97.515 is removed and reserved.

**§ 97.517 [Removed and reserved]**

19. Section 97.517 is removed and reserved.

20. Section 97.519 is amended by revising paragraph (b) and adding a new paragraph (d) to read as follows:

**§ 97.519 Coordinating examination sessions.**

\* \* \* \* \*

(b) At the completion of each examination session, the coordinating VEC must collect the FCC Forms 610

documents and test results from the administering VEs. Within 10 days of collecting the FCC Forms 610 documents, the coordinating VEC must screen and, for qualified examinees, forward electronically or on diskette the data contained on the FCC Forms 610 documents, or forward the FCC Form 610 documents, to: FCC, 1270 Fairfield Road, Gettysburg, PA 17325-7245. When the data is forwarded electronically, the coordinating VEC must retain the FCC Forms 610 documents for at least fifteen months and make them available to the FCC upon request.

\* \* \* \* \*

(d) The FCC may:

(1) Administer any examination element itself;

(2) Readminister any examination element previously administered by VEs, either itself or under the supervision of a VEC or VEs designated by the FCC; or

(3) Cancel the operator/primary station license of any licensee who fails to appear for readministration of an examination when directed by the FCC, or who does not successfully complete any required element that is readministered. In an instance of such cancellation, the person will be granted an operator/primary station license consistent with completed examination elements that have not been invalidated by not appearing for, or by failing, the examination upon readministration.

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## DEPARTMENT OF TRANSPORTATION

### National Highway Traffic Safety Administration

#### 49 CFR Part 571

[Docket No. 93-15; Notice 2]

RIN 2127-AE38

#### Federal Motor Vehicle Safety Standards Lamps, Reflective Devices, and Associated Equipment

AGENCY: National Highway Traffic Safety Administration (NHTSA), DOT.  
ACTION: Final rule.

**SUMMARY:** This notice amends Federal Motor Vehicle Safety Standard No. 108 to specify that plastic materials used in reflex reflectors show not more than 7 percent haze after a 3-year outdoor exposure test, a level at which haze becomes discernable to the naked eye. This amendment will not change the stringency of the standard as it has been

applied, but it will increase its objectivity. NHTSA has not adopted its proposal that cumulative haze not exceed 7 percent when a plastic lens is placed in front of a reflex reflector. Instead, the same haze criterion is applied to the reflex reflector and outer lens material. This approach will limit cumulative haze to about the same level without the need to retest current materials.

**DATES:** The amendment is effective November 1, 1995.

**FOR FURTHER INFORMATION CONTACT:** Patrick Boyd, Office of Rulemaking (202-366-6346).

**SUPPLEMENTARY INFORMATION:** Sierra Products of Livermore, California ("Sierra") filed a "Petition to Amend FMVSS 108 Updating Weather & Heat Testing of Vehicle Lights & Reflectors." In granting the petition, NHTSA considered that three principal issues and several lesser issues merited public consideration and comment. An appropriate notice of proposed rulemaking (NPRM) was published on March 9, 1993, and an opportunity afforded for comment (58 FR 13042). Its primary subject concerned the permissibility of a minimum amount of haze. NHTSA noted that if any of the other issues merited the initiation of rulemaking, a supplemental notice of proposed rulemaking would follow.

Comments on the NPRM were received from Trucklite, Truck Safety Equipment Institute (TSEI), American Automobile Manufacturers Association (AAMA), 3M, Chrysler Corporation, Ford Motor Company, General Motors Corporation (GM), Japan Auto Parts Industries Association (JAPIA), Peterson Manufacturing, Thomas Loughran, and General Electric Plastics (GEP).

#### 1. Haze Limit for Reflex Reflectors

The principal issue of the NPRM concerned the permissible amount of haze after outdoor exposure testing of reflex reflectors. S5.1.2 of Standard No. 108 establishes requirements for plastic materials used for optical parts such as lenses and reflectors. One of the requirements (subsection (c)) is that plastic materials used for reflex reflectors shall meet the appearance requirements of paragraph 4.2.2 of SAE Recommended Practice J576c, May 1970, after the 3-year exposure test specified in the Recommended Practice. Paragraph 4.2.2 states in pertinent part that "The exposed samples, when compared with the unexposed control samples, shall not show \* \* \* haze \* \* \*." Whether a sample shows haze has traditionally been determined by whether haze is visible to the naked eye.



However, all plastics will develop an amount of haze during the weathering test that may not be visible to the naked eye, but which is measurable by instrumentation.

General Electric, the manufacturer of "Lexan," a polycarbonate plastic resin used in reflex reflectors, has stated that its polycarbonate plastic will not pass the weathering test for reflector material unless the reflex reflector manufacturer coats the finished product with an optical coating approved by GE. In its latest revision of J576, SAE has replaced the visual inspection criterion for haze with a 7-percent haze limit for measurement with a hazometer. The committee recommending the change considered the new procedure equivalent to the previous practice but more objective. Properly coated polycarbonates develop about 6 percent haze, and acrylics develop about 3 percent haze in exposure tests conducted in Florida. Such products are certified under the present test and will remain in compliance. NHTSA notes that 7 percent haze is not difficult to discern visually.

Neither Standard No. 108 nor SAE J576c "requires" coating, although that process may, in fact, be the most practicable way to meet the requirements of both. The present requirement may imply the absence of haze after weathering, but an absolute requirement of zero haze is neither practicable nor appropriate. Industry studies used by the SAE Lighting Committee have demonstrated that degradation of reflex reflector performance can be limited to less than 17 percent by preventing haze in excess of 7 percent, but that degradation increases rapidly with further haze to a loss of over 80 percent of initial performance at 21 percent haze. To control reflex reflector degradation and to make the haze test more objective, the SAE amended its Recommended Practice to establish a maximum allowable limit of 7 percent haze for plastics used for reflex reflectors.

The proposal was opposed by AAMA, Ford, Chrysler, GM, and JAPIA. AAMA (supported in these views by Ford, Chrysler, GM, and GEP) believes that the rulemaking is premature for two reasons. The first is that "the agency has not identified any safety problem arising from inadequacies" in the existing requirement. The second is that "there is no currently available information [to motor vehicle manufacturers] that relates haze test data for plastic materials currently used to the performance of reflex reflectors." It recommended that the agency withdraw its NPRM and issue an ANPRM on the

subject. The comments of JAPIA were similar in that it requested an effective date for the final rule 5 years after its issuance to review its appropriateness.

NHTSA disagrees that the rulemaking is premature. The purpose of the rulemaking is to ensure that an existing requirement will more closely conform to that portion of the statutory definition of a Federal motor vehicle safety standard that it "provides objective criteria." (15 U.S.C. 1391(2)). The "inadequacy", to use AAMA's term, of the existing requirement is that it is subjective. As for the second argument, the SAE considered industry data on reflector performance with various haze filters fitted in front of a reflex reflector to quantify performance loss with increased haze, and it reported a subjective demonstration test also using haze filters (haze filters were used in the experiments rather than reflectors in various weathered states because reflector facets prevent the use of a hazometer to measure the degree of haze). NHTSA believes that the needs for safety are met by the current requirement that plastic materials used in optical parts such as lenses meet the weathering test. Absent any treatment of the raw materials that affects its ability to meet J576 (see discussion below), optical parts fashioned from complying plastic materials ought to have the same haze resistance.

AAMA also commented that the proposal would increase the stringency of haze requirements: "[w]hereas the current Standard calls for no visually-perceptible change in haze resulting from outdoor exposure, the proposed revision would set a limit on the total haze of the exposed sample. Even unexposed samples exhibit some measurable haze that would be additive to any incremental haze produced by the three year outdoor exposure test." AAMA is not aware of any body of test data demonstrating whether plastic materials used in current reflex reflectors are capable of meeting a post-exposure limit of 7 percent.

The present requirement contained in 4.2.2 of SAE J576c states that "the exposed samples, when compared with the unexposed control samples, shall not show surface deterioration, crazing, haze, dimensional changes, color bleeding, delamination, or loss of surface luster." The determination of surface deterioration, dimensional changes, and color bleeding require comparison with control samples. But the SAE bases its interpretation of the haze requirement on the premise that low levels of haze are invisible to the naked eye, and it is certainly inappropriate for the samples to have

visible haze before exposure. Therefore, the haze test is actually absolute; the only criterion is whether the exposed sample has visible haze. The "comparison" of visible haze to invisible haze is nothing more than a determination of the visible haze. Implicit in the visual test requirement is a mutually exclusive concept of haze—it is either visible or it is not visible. The concept of relative haze has little meaning unless the instrumentation of the proposed method of measurement is used.

NHTSA presumes that the certification of present materials is based on test data in the possession of material manufacturers. It is likely that haze measurements as well as visual inspection have been performed on current materials following exposure to weathering, but visual inspections alone should be sufficient. It is not difficult to detect 7 percent haze visually and samples already found to endure weathering without the development of visually perceptible haze are unlikely to have developed more than 7 percent haze.

The proposal was supported by Trucklite, TSEI, and Peterson. They pointed out that the SAE Lighting Committee haze task force unanimously recommended the 7 percent haze limit in part because it did not affect the use of plastic resins currently employed for reflex reflectors.

On balance, the agency has concluded that there is no demonstrable reason not to adopt the 7 percent haze limitation for plastic materials used for reflex reflectors.

The second part of the NPRM concerned a proposed cumulative haze limit of 7 percent when a plastic reflex reflector is installed behind a plastic outer lens and not exposed directly to sunlight. This was based upon draft SAE language and was opposed by the commenters. Subsequent to the NPRM the SAE modified its draft so that a cumulative haze limit was an optional part of its specification. NHTSA has decided not to impose a cumulative haze limit of 7 percent, but simply to adopt the same criterion (7 percent haze limit with direct exposure). Thus, S5.1.2(c) as amended by this notice will apply the limit and other criteria to "plastic materials used for reflex reflectors and for lenses used in front of reflex reflectors."

A comment from GE indicated that while uncoated "Lexan" would develop in excess of 30 percent haze in a Florida exposure test, the addition of a glass covering lens would limit haze to 4 to 6 percent. GE also offered data to show that plastic covering lenses provided



similar benefits. In view of the vast reduction in ultraviolet exposure of inner reflectors afforded by glass or plastic outer lenses, the agency concluded that acrylic and coated polycarbonate materials, which experience less than 7 percent haze under direct exposure, would experience negligible haze when protected by an outer lens. Therefore, it is not necessary to consider cumulative haze when material suitable for direct exposure is used with a covering lens, also suitable for direct exposure.

NHTSA's decision not to adopt the cumulative haze provision should allay industry concerns regarding the lack of test data to continue recertifying existing designs using covered reflex reflectors, but it may have the effect of necessitating an optical coating on any polycarbonate reflex reflectors which previously relied on an outer lens to prevent the formation of visible haze.

The SAE haze task force had also considered applying the 7 percent haze limit to plastic headlamp lenses as well as reflex reflectors, but it decided that more work was required to define the safety needs of headlamps. The revision of SAE J576 left the headlamp lens requirement unchanged from previous versions. It states that "plastic material used for forward road illumination devices, excluding cornering lamps, shall show no deterioration." It is not clear whether that specification is meant to be more restrictive than the 7 percent haze limit for reflectors, but it has the same effect in practice as the visual inspection requirement had for reflex reflectors.

NHTSA notes that in Standard No. 108, plastic lenses of replaceable bulb headlamps are subject to an abrasion resistance test, and that most, if not all, lenses must be given an abrasion resistant coating to meet it. It has been the agency's assumption that the hard coating would also protect headlamp lenses against excessive haze. Standard No. 108 does not require the abrasion test for plastic sealed beam headlamps, but NHTSA believes that it is industry practice to coat plastic sealed beam lamps. To pursue the subject of haze limitations for headlamp lens material, NHTSA requested that commenters address five specific issues. Ford was the sole commenter on the first four issues. These issues and Ford's comments follow:

(1) Whether there are any replaceable bulb headlamps with plastic lenses that do not use a hard coating to achieve abrasion resistance.

Ford's headlamps of this type all employ a hard coating.

(2) Whether all abrasion resistant coatings also prevent the formation of more than 7 percent haze on samples of plastics used in headlamp lenses which are subjected to the 3-year test.

In Ford's experience, coatings prevent formation of haze that exceeds 7 percent.

(3) Whether there are any sealed beam headlamps with plastic lenses that do not use a hard coating for either haze or abrasion resistance.

Ford used headlamps of this type in two model lines for one model year each a decade and a half ago. The lamps used an acrylic coating to prevent yellowing of the polycarbonate lens.

(4) Whether the adoption of a 7 percent haze limit for plastic headlamp lenses would create a burden on industry, and if so, the nature and severity of the burden.

Ford does not believe that it would create a burden "except possibly for some initial additional testing."

(5) Whether the industry favors harmonization of Standard No. 108 with SAE J576 for haze resistance of plastic headlamp lens materials.

Ford and another commenter, Truck-Lite, supported application of Standard No. 108 to materials for plastic headlamp lenses, albeit with the more recent versions of SAE J576, those of 1986 and 1991.

It appears that the abrasion resistance requirements for replaceable bulb headlamps and the industry practice of hard coating sealed beams already act to prevent haze on plastic headlamp lenses that exceed 7 percent. NHTSA remains interested in any SAE attempts to establish an appropriate haze criterion for headlamp lenses, but it appears that there is no safety need for rulemaking at present.

## 2. Thermal Degradation of Acrylic Reflex Reflectors

Sierra also claimed that current weathering tests do not address the loss of reflector performance for causes other than haze. It criticized the agency for deleting the lens warpage test in 1973 which regulated distortion from heat. Before then, Standard No. 108 incorporated the heat test of SAE Standard J575d which consisted of operating a lamp for one hour in a chamber heated to 120 degrees F. The lamp would reach a temperature higher than that from the heat of the filament. At the conclusion of the test, no warpage could result that would "affect the proper functioning of the device." Since the requirement was ambiguous, NHTSA eliminated it. However, in light of Sierra's complaint, NHTSA has reviewed the matter. When the heat test

was deleted, the principal concern of the test seemed to be gross distortions of through-optic lenses. It appears that the heat damage to a lens with an integral reflex reflector was not considered.

There are limited data indicating that acrylic reflex reflectors may suffer from heat degradation. The General Electric Company (GE) has reported (NHTSA Docket No. 108-PRM-000015-01) a weathering test in Florida in which amber and yellow acrylic reflex reflectors decreased in specific intensity by 18 to 32 percent after an exposure of one year, regardless of the angle of exposure. GE attributed the decrease in photometric performance to minute distortions of the reflex lens (which the industry calls "creep") which occurred when the plastics were exposed to direct sunlight (temperatures of 150 to 160 degrees F).

In view of this test, NHTSA sought comments on the potential problem of heat degradation of acrylic plastic reflex reflectors. NHTSA requested commenters to address the following:

(1) Whether the commenter has test or other data relating to the performance of acrylic reflectors after exposure to heat.

(2) The threshold temperatures for creep and stress relaxation for acrylic plastics used for lamp lenses.

(3) Whether creep will stabilize or continue indefinitely.

(4) The maximum temperature acrylic lenses may endure without experiencing visible deformation.

(5) The length of exposure required for stability at slightly over the threshold temperature and at the maximum temperature stated in response to (4).

(6) The maximum loss of photometric performance to be expected if the creep and stress relaxation eventually stabilize.

(7) The maximum operating temperature of multiple function rear lamps on passenger cars, trucks, and trailers under realistic extreme conditions.

(8) Whether integral reflex reflectors would degrade under the conditions stated in response to (7).

(9) The test procedures that would be effective and practicable for testing reflectors and lamps with integral reflectors for the purpose of detecting which devices would degrade significantly in service.

Comments were received from TSEI, Peterson, 3M, Ford, and Trucklite. They reported that acrylic devices are designed to operate up to about 170 degrees F and that stress relaxation begins at about 180 degrees. A heat test of plastic samples at 175 degrees F is



incorporated by reference in Standard No. 108. The amount of distortion experienced at temperatures between 180 and 200 degrees F depends on the residual stress at the particular location, and the speed at which it stabilizes depends on the temperature. Unlike haze, creep is not indefinitely progressive; stabilization occurs in a matter of hours at elevated temperature.

All lamp manufacturers reported using a heat warpage test of some sort, even though no longer required by Standard No. 108. Some test more stringently than SAE J575d. Some commenters reported using photometric testing after a heat warpage test while others used a visual examination (the method set forth in SAE J575d). Peterson reported that acrylic lenses with reflectors subjected to SAE J575d show less than 5 percent losses in photometric brightness.

The agency eliminated the warpage test because it did not deem it required for safety. The degradation of acrylic reflectors alleged by Sierra would not be detected under SAE J575d which specifies a visual inspection.

Creep would affect a reflex reflector in a way fundamentally different from haze. Haze reduces the brightness of the reflector at all light entrance angles. Creep may cause the reflex reflector to lose brightness at some angles while gaining brightness at other angles. It appears unlikely that the loss of brightness reported by General Electric was the result of creep. GE did not test the acrylic reflectors thoroughly enough to make well founded conclusions about their performance.

In sum, there is no evidence that reflex reflectors degrade before other visible damage occurs.

### 3. Dye Loss of Acrylic Reflectors and Lenses

Sierra claimed that the weathering test of Standard No. 108 is inadequate because complying red and amber acrylic lenses lose their color in use. NHTSA responded that the breakdown of the dye may not be a property of the plastic but of the dye itself. Dyes with higher temperature tolerance are frequently used in polycarbonate products because they may be designed for higher temperature applications than acrylic products, but there is no property of acrylic plastic which contributes to fading. NHTSA understands, however, that the SAE adopted the three-year test when plastic began to replace glass because of some concern that plastic would not be as fade resistant as glass.

NHTSA requested that commenters provide information on the following:

(1) Whether the commenter has test or other data relating to fading or loss of dye color in acrylic or polycarbonate lenses through exposure to heat or weathering.

(2) Whether any data exist indicating that acrylic or polycarbonate lenses fade or do not fade under realistic operating conditions.

(3) The conditions under which fading could be expected.

(4) Whether there is any reason to believe that acrylic lenses are more subject to this type of degradation than polycarbonate lenses.

(5) Whether the commenter has observed faded lenses in service and, if so, what views the commenter has about the cause of the fading.

(6) Whether the three-year test of SAE J576, conducted in Florida and Arizona, is sufficient to identify plastic materials prone to fade in color.

(7) The kind of test procedure that would be effective and practicable for testing lenses or plastic materials used in lenses to detect any propensity to fade significantly in service.

Comments were received from TSEI, Peterson, 3M, Ford, Trucklite, and Thomas Loughran. The commenters believe that the three year weathering test of SAE J576 is adequate to identify plastic materials that are prone to fading. Acrylic materials do not appear to have a greater tendency to fade than polycarbonate materials. Peterson has observed that dyes used in acrylic material darken slightly as a result of sustained exposure to sunlight. TSEI reported that the only faded lenses in service which have been observed by its membership have been identified as made of noncomplying materials. Mr. Loughran suggested that faded lenses result from the practice of blending virgin and reground material with additional dye at the time of molding.

Ford suggested that a modified xenon accelerated weathering test would be effective for testing colored plastic materials for their propensity to fade in service. This test would be configured to correlate with the three year weathering test. The object of accelerated testing with xenon lamps would be increased productivity rather than increased accuracy of detection.

The comments were unanimous in supporting the existing rule as an effective and sufficient test for dye loss of lamp and reflector materials. However, it appears from Mr. Loughran's comment that the uncontrolled use of reground material and added dye can create noncomplying plastic material to a greater degree than the lamp industry recognizes. NHTSA believes that the fading problem

observed by the petitioner is the likely result of lamp manufacturing practices brought to its attention by Mr. Loughran. Accordingly, there appears to be no reason to change the present weathering test.

With respect to Mr. Loughran's comments, NHTSA takes this opportunity to present its views on the obligations of a manufacturer of reflex reflectors. The haze requirement is imposed by S5.1.2 upon "plastic materials used in optical parts". SAE Standard J594f "Reflex Reflectors" January 1977 as incorporated into Standard No. 108 at 3.2 references the plastic material test of SAE J576. This imposes an obligation upon the manufacturer of a reflex reflector to use plastic materials meeting J576. Thus, the manufacturer has an obligation to ensure that its acts do nothing to negate the conformance of the raw material with the tests of J576 when it is fashioned into reflectors.

A weathering test performed by NHTSA and comments to the docket suggest that lamp manufacturers need to take care that their coating practices actually meet the specifications used by plastic manufacturers to certify material properties. NHTSA's test included coated and uncoated "Lexan" samples exposed in Florida and Arizona. The uncoated samples failed the test visually as well as by the development of more than 7 percent haze before the end of the first year at both exposure sites. At the end of the second year, the coated Arizona sample had developed slightly less than 7 percent haze, but haze was plainly visible. The coated Florida sample had failed in both respects with 10.5 percent haze after a two-year exposure. Its uncoated mate had developed 10.3 percent haze in one year. At the end of the third year, the large haze reductions of the coated specimens, seen after one- and two-years exposure, had disappeared. Both Arizona specimens had slightly less than 20 percent haze and both Florida specimens had slightly more than 30 percent haze. The 24-month results were available at the time of the NPRM and were placed in the docket.

TSEI and Peterson commented on the 24-month test results, and Thomas Loughran's comment is relevant to cases of premature degradation. TSEI and Peterson consider the failure of coated sample to be an anomaly, uncharacteristic of the performance of all other coated polycarbonates in their experience. In their view, the failure is due to a faulty coating. Peterson suggested that either the coating thickness or the curing process was not performed in accordance with the



plastic manufacturer's specifications. The rapid surface degradation of both coated samples occurring in the period between 24 and 36 months exposure and the apparent flaking of the coating of the Arizona 18-month specimen support Peterson's opinion of faulty coating.

Mr. Loughran was concerned that coated polycarbonates may not meet the 7 percent haze limit either as samples or as finished products. He cited knowledge of Arizona exposure tests in which coated polycarbonate reflectors suffered 60 percent to 70 percent losses in reflective performance, and he suggested testing of finished products as well as material.

Mr. Loughran's experience appears to be at odds with the confidence of TSEI, Peterson, Trucklite, and the SAE haze task force that coated polycarbonate plastic will haze less than 7 percent in a 3-year exposure test. However, it is likely that departures from virgin material and poor coating practices can combine to cause inferior performance in products nominally made from certified materials.

These data suggest the beneficial effect of coating on polycarbonate plastic will not be sufficiently durable to meet the performance certified after the material unless the material manufacturer's recommendations are followed rigorously. While the presence of some coating material does not guarantee compliance, the absence of coating seems to ensure that plastics such as polycarbonates will quickly fail the haze test. Use of coatings with a tint element visible under an ultraviolet inspection light affords a simple, practicable way for regulatory bodies such as NHTSA to discern whether relevant plastic materials have been coated. The 3-year test period appears to be unnecessarily long in those instances where test failures occur long in advance, such as samples that manifest haze at the end of an exposure of only a year's duration. Failure to tint, and premature hazing afforded a basis upon which NHTSA can determine noncompliance without having to complete pro forma the 3-year test period and unnecessarily delay the remedy of a noncompliant product.

#### 4. Miscellaneous Issues

3M suggested that a test measuring reflective brightness before and after exposure of retroreflective devices be established as an alternative to haze testing so that sheeting material devices could qualify as reflex reflectors. No specific test procedures or criteria were included in the comment. Because this issue is beyond the scope of the present

rulemaking, it could not be not considered in formulating the final rule.

#### Rulemaking Analyses

##### *Executive Order 12866 and DOT Regulatory Policies and Procedures*

This rulemaking action has not been considered under E.O. 12866. NHTSA has considered the impacts of this rulemaking action and has determined that it is not significant under Department of Transportation regulatory policies and procedures. The stringency of the haze requirement would not be changed. Further, manufacturers of plastic materials are currently measuring the haze of weathered samples by ASTM D 1003, which will govern the certification to the 7 percent haze limit. In addition, according to the agency's observation that haze not detectable by the human eye is also less than 7 percent, conformance of a reflector with the haze requirement could still be judged with the naked eye. Impacts of the final rule are, therefore, be so minimal as not to warrant preparation of a full regulatory evaluation.

##### *Regulatory Flexibility Act*

The agency has also considered the effects of this rulemaking action in relation to the Regulatory Flexibility Act. I certify that this rulemaking action would not have a significant economic effect upon a substantial number of small entities. Manufacturers of plastic materials are generally not small businesses within the meaning of the Regulatory Flexibility Act. Further, small organizations and governmental jurisdictions would not be significantly affected as the price of new motor vehicles should not be impacted. Accordingly, no Regulatory Flexibility Analysis has been prepared.

##### *Executive Order 12612 (Federalism)*

This action has been analyzed in accordance with the principles and criteria contained in Executive Order 12612 on "Federalism." It has been determined that the rulemaking action does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

##### *National Environmental Policy Act*

NHTSA has analyzed this rulemaking action for purposes of the National Environmental Policy Act. The rulemaking action would not have a significant effect upon the environment.

##### *Civil Justice Reform*

This rule would not have any retroactive effect. Under 49 U.S.C. 30103 (formerly section 103(d) of the

National Traffic and Motor Vehicle Safety Act (15 U.S.C. 1392(d)), whenever a Federal motor vehicle safety standard is in effect, a state may not adopt or maintain a safety standard applicable to the same aspect of performance which is not identical to the Federal standard. Forty-nine U.S.C. 30161 (formerly Section 105 of the Act (15 U.S.C. 1394)) sets forth a procedure for judicial review of final rules establishing, amending, or revoking Federal motor vehicle safety standards. That section does not require submission of a petition for reconsideration or other administrative proceedings before parties may file suit in court.

#### List of Subjects in 49 CFR Part 571

Imports, Motor vehicle safety, Motor vehicles.

#### PART 571—FEDERAL MOTOR VEHICLE SAFETY STANDARDS

In consideration of the foregoing, 49 CFR Part 571 is amended as follows:

1. The authority section continues to read as follows:

**Authority:** 49 U.S.C. 322, 30111, 30115, 30117, 30161; delegation of authority at 49 CFR 1.50.

2. In § 571.108, S5.1.2(c) is revised to read:

**§ 571.108 Standard No. 108; Lamps, reflective devices, and associated equipment.**

\* \* \* \* \*

S5.1.2 \* \* \*

(c) After the outdoor exposure test, plastic materials used for reflex reflectors and for lenses used in front of reflex reflectors shall not show surface deterioration, crazing, dimensional changes, color bleeding, delamination, loss of surface luster, or haze that exceeds 7 percent as measured under ASTM D 1003-61.

Issued on: October 27, 1994.

**Christopher A. Hart,**  
Deputy Administrator.

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